

Application No. 10/755,700

Remarks

Applicants thank the Examiner for her careful consideration of the application.

Claims 1 – 11, 13 – 27, and 29 – 32 stand rejected.

Claim Objections

The Examiner objected to claim 8 as having insufficient antecedent basis for limitations in the claim and for the purpose of rejection, the Examiner assumed that "each column" referred to the "columnar arrays." Applicants have amended claim 8.

Claim 18 is objected to as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have canceled claim 18.

Claim 24 recites the limitations "the first linear sub-column" in lines 2 – 3. The Examiner asserts there is insufficient antecedent basis for this limitation in the claim. For the purpose of rejection, the Examiner assumed that this limitation referred to the "first sub-column." Applicants believe the Examiner is mistaken as claim 17 refers to a first linear subcolumn and a second linear subcolumn. Applicants have instead amended claim 24 to more clearly reference the second linear subcolumn.

Claim Rejections – 35 USC § 103

The Examiner rejected claims 1 – 8, 10, 11, 13, 14, 16 – 24, 26, 27, 29, 30, and 32 under 35 USC § 103(a) as being unpatentable over Hoisington (US Patent No. 5,757,400) ("Hoisington") in view of Kanda et al (US Patent No. 6,502,921) ("Kanda"). Applicants respectfully traverse these rejections.

In claim 1, Applicants recite a drop emitting device. The device includes a linear array of side by side substantially mutually parallel columnar arrays of ink drop generators, the

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linear array extending along an X-axis, and the columnar arrays being oblique to the X-axis. Each columnar array is comprised of a first sub-column of ink drop generators that is interleaved with a second sub-column of ink drop generators. The first sub-columns of ink drop generators are fluidically coupled to a first ink manifold and the second sub-columns of ink drop generators are fluidically coupled to a second ink manifold.

In claim 11, Applicants recite a drop emitting device. The device includes a linear array of side by side substantially mutually parallel columnar arrays of ink drop generators, the linear array of columnar arrays of ink drop generators extending along an X-axis, and the columnar arrays of drop generators being oblique to the X-axis. Each columnar array is comprised of a first sub-column of ink drop generators that is interleaved with a second sub-column of ink drop generators.

In claim 17, Applicants recite a drop emitting device that includes a first linear array of side by side substantially mutually parallel first columnar arrays of ink drop generators and a second linear array of side by side substantially mutually parallel second columnar arrays of ink drop generators. The first linear array of first columnar arrays of ink drop generators extends along an X-axis, and the first columnar arrays are oblique to the X-axis. The second linear array of side by side substantially mutually parallel second columnar arrays of ink drop generators extends along the X-axis, the second columnar arrays is oblique to the X-axis. Each first columnar array of ink drop generators includes a first linear sub-column of ink drop generators that is interleaved with a second linear sub-column of ink drop generators and each second columnar array includes a third linear sub-column of ink drop generators that is interleaved with a fourth linear sub-column of ink drop generators. The second linear array of columnar arrays is adjacent the first linear array of first columnar arrays along a second axis orthogonal to the X-axis. The first linear sub-column of ink drop generators is fluidically coupled to a first ink manifold, the second linear sub-column of ink drop generators is fluidically coupled to a second ink manifold, the third linear sub-column of ink drop generators is fluidically coupled to a third ink manifold, and the fourth linear sub-column of ink drop generators is fluidically coupled to a fourth ink manifold.

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In claim 27, Applicants recite a drop emitting device. The device includes a linear array of side by side substantially mutually parallel first columnar arrays of ink drop generators and a second linear array of side by side substantially mutually parallel second columnar arrays of ink drop generators, the second linear array of columnar arrays being adjacent the first linear array of first columnar arrays along a second axis orthogonal to the X-axis. The linear array of first columnar arrays of ink drop generators extends along an X-axis, and the first columnar arrays are oblique to the X-axis. The second linear array of side by side substantially mutually parallel second columnar arrays of ink drop generators extends along the X-axis, the second columnar arrays being oblique to the X-axis. Each first columnar array is comprised of first and second linear sub-columns of ink drop generators that are interleaved with each other, and each second columnar array is comprised of third and fourth linear sub-columns of ink drop generators that are interleaved with each other.

The Examiner should withdraw the rejection to claims 1, 11, 17, and 27 as the Examiner has not established that the prior art discloses all the limitations of any of claims 1, 11, 17, or 27. Specifically, the Examiner has not established that either Hoisington or Kanda discloses a linear array of side by side substantially mutually parallel columnar arrays of ink drop generators, wherein each columnar array is comprised of a first sub-column of ink drop generators that is interleaved with a second sub-column of ink drop generators. The Examiner points to Figure 3 of Hoisington for these limitations, but Applicants do not understand the Examiner's claim. First, the "sub columns" identified by the Examiner appear to be from two different columnar arrays. Second, Applicants can discern no apparent interleaving within a columnar array. From the description associated with Figure 3, it appears that each columnar array identified by the Examiner includes four colors such as C, M, Y, and K. Similar to the disclosure of the Moore reference used by the Examiner in the last office action, Figure 3 of Hoisington appears to show a simple four-color printhead with no interleaved subcolumns in a columnar array. The Examiner has also not identified such structure in Kanda either. For each of the foregoing reasons, the Examiner has not shown how Figure 3 of Hoisington anticipates two interleaved columns and has not established that the combination of Hoisington and Kanda anticipates any of claims 1, 11, 17, and 27.

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The Examiner should allow claims 2 – 8, 10, 13, 14, 16, 18 – 24, 26, 29, 30, and 32 if claims 1, 11, 17, and 27 are allowed, as claims 2 – 8 and 10 depend from claim 1, claims 13, 14, and 16 depend from claim 11, claims 18 – 24 and 16 depend from claim 17, and claims 29, 30, and 32 depend from claim 27.

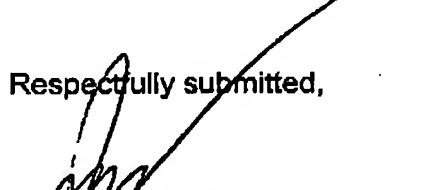
The Examiner rejected claims 9, 15, 25, and 31 under 35 USC § 103(a) as being unpatentable over Hoisington, in view of Kanda, as applied to claims 1 and 11 above, and further in view of Erickson (US Patent No. 5,079,571) ("Erickson"). Applicants respectfully traverse these rejections. The Examiner should allow claims 9, 15, 25, and 31 if claims 1, 11, 17, and 27 are allowed as claim 9 depends from claim 1, claim 15 depends from claim 11, claim 25 depends from claim 17, and claim 31 depends from claim 27.

Conclusion

No additional fee is believed to be required for this amendment. However, the undersigned Xerox Corporation attorney hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation Deposit Account No. 24-0025.

A telephone interview is respectfully requested at the number listed below prior to any further Office Action, i.e., if the Examiner has any remaining questions or issues to address after this paper. The undersigned will be happy to discuss any further Examiner-proposed amendments as may be appropriate.

Respectfully submitted,



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